

CLAIMS

What is claimed is:

1. A method for auditing an optical network, comprising the steps of:
  - a) transmitting a query to a hardware device in said optical network;
  - b) receiving a response to said query;
  - c) analyzing said response to said query; and,
  - d) producing a report of said response and said analysis.
2. The method described in Claim 1, further comprising the step of transmitting a second query to said hardware device, said second query based on said response to said first query, in order to gather status information of said hardware device.
3. The method described in Claim 1, wherein said report includes recommendations associated with the management of said network.
4. The method described in Claim 1, wherein at least a portion of said network is implemented as a DWDM optical network.
5. The method described in Claim 1, wherein said hardware device is a portion of said network's infrastructure.
6. The method described in Claim 1, wherein said hardware device is a DWDM device.
7. The method described in Claim 1, wherein said step of transmitting said transmitted query codes is accomplished entirely within said optical network.

8. The method described in Claim 1, wherein said transmitted query codes are generated by a dedicated network audit device.

9. The method described in Claim 1, wherein said receiving of said received responses is accomplished entirely within said network.

10. The method described in Claim 1, wherein said first query code requests information related to the part number and location in said optical network of said hardware device.

11. The method described in Claim 1, wherein said second query code is determined by database reference to the hardware type of said hardware device.

12. The method described in Claim 2, wherein said further step of analyzing said responses to said queries is performed by automated intelligent decision-making.

13. A system for auditing an optical network, comprising:

Two or more computer systems;

An optical network coupled to said computer systems, said network communicatively coupled with said computer systems, said optical network comprising an optical medium and optical devices for providing a communication link between said computer systems; and,

A device coupled to said optical network and capable of transmitting queries in said optical network to said optical devices.

14. A system as described in Claim 12 wherein at least a portion of said optical network is implemented as a DWDM optical network.

15. A system as described in Claim 12 wherein said system further comprises a device coupled to said optical network capable of receiving responses to said transmitted queries.
16. A system as described in Claim 12 wherein at least one of said computer systems comprises a data storage device, capable of storing instructions for transmitting said queries in said optical network.
17. A system as described in Claim 12 wherein at least one of said computer systems comprises a data storage device, capable of storing instructions for receiving responses to said queries in said optical network.
18. A system as described in Claim 12 wherein at least one of said computer systems is capable of automatically analyzing said responses to said queries.
19. A system as described in Claim 12 further comprising a device capable of presenting said responses and said analysis in a user readable format.
20. A device for auditing an optical network, comprising:
  - A transmitting element coupled to said optical network;
  - A receiving element coupled to said optical network; and,
  - A computing element, coupled to said optical network, wherein said device for auditing an optical network is capable of formulating and transmitting queries to devices in said optical network and receiving responses to said queries.
21. A device as described in Claim 19 wherein said device is further capable of automatically analyzing said responses to said queries.

22. A device as described in Claim 19 wherein said device is further capable of presenting the results of said automatic analyzing in a user-readable format.
23. A device as described in Claim 19 wherein said device is further capable of making recommendations for appropriate action in the management of said optical network.
24. A device as described in Claim 19 wherein at least a portion of said optical network is implemented as a DWDM optical network.